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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/737,113	12/16/2003	Robert E. Briley	17006-14	5494

7590 07/13/2005

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EXAMINER

KRUER, KEVIN R

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/737,113

Applicant(s)

BRILEY, ROBERT E.

Examiner

Kevin R. Kruer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 April 2005.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
4a) Of the above claim(s) 7, 14 and 17 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-6, 8-13, 15, 16, 18 and 19 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 26 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/23/04 5/24/04
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I, claims 1-6, 8-13, 15, 16, 18, and 19 in the reply filed on April 29, 2005 is acknowledged. The traversal is on the ground(s) that claims 8 and 11 do not require a pre-washing or pretreatment step. This is not found persuasive because said claims are properly restricted from the product claims. Specifically, the rivets of claims 7, 14, and 17 could be made by a process wherein the rivet is not heat treated or utilized in a process wherein the rivet comprise more than two workpieces together.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 7, 14, and 17 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 4/29/2005.

Information Disclosure Statement

3. The information disclosure statements filed May 24, 2004 and April 23, 2004 have been fully considered. Initialed copies of said IDS are enclosed herein.

Drawings

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 12. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in

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compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 3, 6, 8, and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 3, 6, 8, and 12 recite the limitation "corrosion inhibitor" in the third line of the claim. There is insufficient antecedent basis for this limitation in the claim.

Double Patenting

7. Applicant is advised that should claim 3 be found allowable, claim 6 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing

one claim to object to the other as being a substantial duplicate of the allowed claim.

See MPEP § 706.03(k).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 8-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keener (US 6,403,230) in view of Kishikawa et al (2002/0029826).

Keener teaches a method of masking an aluminum fastener prepared by providing an aluminum alloy article precursor that is not in its final heat treated state and providing a curable organic coating thereon (abstract). The fastener may be a rivet (col 4, line 31) and may be heat-treated to increase its shear strength (col 4, lines 55+). The fastener is optionally chemically etched, grit blasted or other-wise processed to roughen its surface and thereafter anodized in chromic acid solution (col 5, lines 48+). The curable coating may comprise a phenolic resin, strontium chromate, and a solvent such as ethanol, toluene, or methyl ethyl ketone (col 6, lines 42+). The rivet is used to rivet two workpieces together (Fig 7) while the coating seals the rivet (col 8, lines 9+).

Keener does not explicitly teach the coating should be cured under the claimed conditions. However, Keener teaches that the rivet and the applied coating may be heated together to a suitable temperature in order to achieve heat aging and curing in a

single step (col 7, lines 19+). The temperature and time of said step is selected to be that required to achieve the desired properties. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to vary the time and temperature at which the coating was cured. The motivation for doing so would have been to obtain a rivet with the desired properties.

Keener teaches that the coating provides the rivet with corrosion protection (col 1, lines 49+), but does not teach the claimed thickness of said coating. However, it is known in the art that corrosion protection is proportional to coating thickness. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to vary the coating thickness of the organic coating. The motivation for doing so would have been to optimize corrosion resistance.

Keener does not teach that the coating should contain polyvinyl butyral. However, Kishikawa teaches a surface-treated metal comprising a corrosion inhibitor and a binder, wherein the binder comprises a mixture of polyvinyl butyral with another resin compatible with the butyral resin (abstract), such a phenol (0024). The butyral is very soft and flexible and adapts without difficulty to the changing shape of the metal (000027). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add polyvinyl butyral to the phenolic coating taught in Keener. The motivation for doing so would have been that the polyvinyl butyral would allow the coating to adapt without difficulty to the changing shape of the rivet.

10. Claims 1-6 15, 16, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Keener (US 6,403,230) in view of Kishikawa et al (2002/0029826), as

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applied to claims 8-13 above, and further in view of Nonweiler et al (US 5,610,215) and Kaneko et al (US 4,421,789).

Keener in view of Kishikawa is relied upon as above. Specifically, Keener teaches that the rivet may be grit blasted, but does not teach that the rivet may be grit blasted with aluminum oxide. However, Nonweiler teaches that aluminum oxide is known in the art to be useful for grit blasting aluminum substrates (col 7, lines 7+). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize aluminum oxide to grit blast the rivet taught in Keener. The motivation for doing so would have been that such a process is known in the art.

Keener also does not teach that the coating should be washed with chromic acid and a fluorine compound. However, Kaneko teaches a method of improving the corrosion resistance of an aluminum substrate by subjecting said substrate to a chromating treatment (col 2, lines 34+). Such treatments involve washing the substrate with a solution containing chromic acid and fluorides. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to chromate the surface of the rivet taught in Keener with a solution comprising chromic acid and a fluorine compound. The motivation for doing so would have been to improve its corrosion resistance.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin R. Kruer whose telephone number is 571-272-1510. The examiner can normally be reached on Monday-Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin R. Kruer
Patent Examiner-Art Unit 1773